



## Residual current circuit breaker (RCCB), 40A, 4p, 30mA, type A

**Part no.** FRCMM-40/4/003-A  
**Catalog No.** 170333  
**Eaton Catalog No.** FRCMM-40/4/003-A

Similar to illustration

### Delivery program

|                              |                |    |  |
|------------------------------|----------------|----|--|
| Basic function               |                |    | Residual current circuit-breakers                              |
| Number of poles              |                |    | 4 pole   |
| Application                  |                |    | Switchgear for industrial and advanced commercial applications |
| Rated current                | $I_n$          | A  | 40   |
| Rated short-circuit strength | $I_{cn}$       | kA | 10 with back-up fuse   |
| Rated fault current          | $I_{\Delta N}$ | A  | 0.03   |
| Type                         |                |    | Type A   |
| Tripping                     |                | A  | non-delayed  |
| Product range                |                |    | FRCmM  |
| Sensitivity                  |                |    | Pulse-current sensitive  |
| Impulse withstand current    |                |    | Partly surge-proof 250 A                                       |
| Contact sequence             |                |    |  |

### Technical data

#### Electrical

|  |                      |            |                                  |
|--|----------------------|------------|----------------------------------|
| Types conform to   |                      |            | IEC/EN 61008                     |
| Current test marks   |                      |            | As per inscription               |
| Tripping   |                      | A          | non-delayed                      |
| Rated operating voltage  | $U_n$                | V AC       | 240/415                          |
| Rated frequency  | f                    | Hz         | 50                               |
| Limit values of the operating voltage  |                      |            |                                  |
| Test circuit   |                      | V AC       | 196 - 264                        |
| Rated fault current  | $I_{\Delta n}$       | mA         | 30                               |
| Sensitivity  |                      |            | Pulse-current sensitive          |
| Rated insulation voltage   | $U_i$                | V          | 440                              |
| Rated impulse withstand voltage  | $U_{imp}$            | kV         | 4 (1.2/50 $\mu$ s)               |
| Rated short-circuit strength   | $I_{cn}$             | kA         | 10 with back-up fuse             |
| Impulse withstand current  |                      |            | 250 A (8/20 $\mu$ s) surge-proof |
| Max. admissible back-up fuse   |                      |            |                                  |
| Short-circuit  | gG/gL                | A          | 63                               |
| Overload   | gG/gL                | A          | 40                               |
| Rated making and breaking capacity / Rated residual making and breaking capacity | $I_m / I_{\Delta m}$ | A          | 500                              |
| lifespan   |                      |            |                                  |
| Electrical   |                      | Operations | 2000                             |
| Mechanical   |                      | Operations | 10000                            |

#### Mechanical

|                          |  |    |   |
|--------------------------|--|----|---|
| Standard front dimension |  | mm | 45  |
| Device height            |  | mm | 80  |
| Built-in width           |  | mm | 70 (4TE)  |
| Mounting                 |  |    | Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715 |
| Degree of Protection     |  |    | IP20 switches<br>IP 40 enclosed                                   |

|  |  |                 |   |
|--|--|-----------------|---|
| Terminals top and bottom                       |  |                 | Twin-purpose terminals  |
| Terminal protection                            |  |                 | Busbar tag shroud to BGV A3, ÖVE-EN 6                                     |
| Terminal cross-section                         |  |                 |   |
| Solid  |  | mm <sup>2</sup> | 1.5 - 35  |
| Stranded                                       |  | mm <sup>2</sup> | 2 x 16  |
| Terminal cross-section                         |  |                 | M5 (with cross-recessed screw as defined in EN ISO 4757-Z2, Pozidriv PZ2) |
| Tightening torque of fixing screws             |  | N/m             | 2 - 2.4   |
| Thickness of busbar material                   |  | mm              | 0.8 - 2   |
| Admissible ambient temperature range           |  | °C              | -25 - +40   |
| Permissible storage and transport temperatures |  | °C              | -35 - +60   |
| Climatic proofing                              |  |                 | according to IEC/EN 61008   |
| Mounting position                              |  |                 | As required   |
| Contact position indicator                     |  |                 | red / green   |
| Trip indication                                |  |                 | white / blue  |

## Design verification as per IEC/EN 61439

|   |                   |    |      |
|---|-------------------|----|------|
| Technical data for design verification  |                   |    |      |
| Rated operational current for specified heat dissipation                                  | I <sub>n</sub>    | A  | 40   |
| Heat dissipation per pole, current-dependent  | P <sub>vid</sub>  | W  | 0    |
| Equipment heat dissipation, current-dependent   | P <sub>vid</sub>  | W  | 13.1 |
| Static heat dissipation, non-current-dependent  | P <sub>vs</sub>   | W  | 0    |
| Heat dissipation capacity   | P <sub>diss</sub> | W  | 0    |
| Operating ambient temperature max.  |                   | °C | -25  |
| Operating ambient temperature max.  |                   | °C | 55   |
| Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C |                   |    |      |

## Technical data ETIM 6.0

Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ecl@ss8.1-27-14-22-01 [AAB906011])

|  |  |    |          |
|--|--|----|----------|
| Number of poles                                    |  |    | 4        |
| Nominal rated voltage                              |  | V  | 415      |
| Nominal rated current                              |  | A  | 40       |
| Rated fault current                                |  | A  | 0.03     |
| Mounting method                                    |  |    | DIN rail |
| Leakage current type                               |  |    | A        |
| Selective protection                               |  |    | No       |
| Short-circuit breaking capacity (I <sub>cw</sub> ) |  | kA | 10       |
| Surge current capacity                             |  | kA | 0.25     |
| Frequency  |  |    | 50 Hz    |
| Additional equipment possible                      |  |    | Yes      |
| Degree of protection (IP)                          |  |    | IP20     |
| Construction size (in accordance with DIN 43880)   |  |    | 1        |
| Width in number of modular spacings                |  |    | 4        |
| Built-in depth                                     |  | mm | 70.5     |
| Short-time delayed tripping                        |  |    | No       |

## Dimensions

